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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,440	05/15/2001	Hirotaka Uchiyama	8084	9009

27752 7590 09/03/2003

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EXAMINER

JONES, DWAYNE C

ART UNIT PAPER NUMBER

1614

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant No.	Applicant(s)
	09/855,440	UCHIYAMA ET AL.
	Examiner	Art Unit
	Dwayne C Jones	1614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 June 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-52 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-52 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Status of Claims

1. Claims 1-52 are pending.
2. Claims 1-52 are rejected.

Response to Arguments

3. Applicants' arguments filed June 9, 2003 have been fully considered but they are not persuasive. Applicants present the following arguments. First, the prior art reference of Wilson et al. fails to specify that the cyclodextran (CD) is "functionally available". Second, applicants allege that Wilson et al. fail to disclose that the CD is suitable for capturing unwanted molecules as is claimed in the instant invention. Third, applicants' allege that there is no suggestion to combine the prior art references of Laughlin et al. of U.S. Patent No. 3,959,461 in view of Bailey et al. of U.S. Patent No. 3,929,678 in view of Bailey et al. of U.S. Patent No. 3,299,112 with Wilson et al.

4. First, the prior art reference of Wilson et al. fails to specify that the CD is "functionally available". Applicants further allege that the CDs of Wilson et al. are not "functionally available" because they are not present in either uncomplexed form or complexed with materials having a CD complexation constant of less than about $5,000M^{-1}$. Since applicants claims 1-44 are composition claims, the outstanding rejection under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. in view of Laughlin et al. of U.S. Patent No. 3,959,461 in view of Bailey et al. of U.S. Patent No. 3,929,678 in view of Bailey et al. of U.S. Patent No. 3,299,112 is maintained for the

ensuing reasons. Wilson et al. also teach that CD is “functionally available”. More specifically, Wilson et al. teach of beta-CD that is uncomplexed as well as beta-CDs that possess complexation constants that are less than about $5,000\text{M}^{-1}$, (see Scheme 1, column 1, page 928 and Tables 1 and 2, column 2, page 928). In addition, Wilson et al. further teach of binding constants between beta-cyclodextrin and fluorocarbon as well as anionic surfactants, (see pages 927 and 928).

5. In response to applicant's argument that Wilson et al. fail to disclose that the CD is suitable for capturing unwanted molecules as is claimed in the instant invention, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Claims 1-44 are composition claims with an intended use, namely “for capturing unwanted molecules”.

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the instant claims are composition claims, which require the presence three components (1) a functionally available CD, (2) a CD-incompatible surfactant, and (3) a CD-compatible surfactant. Accordingly, the outstanding rejection under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. in view of Laughlin et al. of U.S. Patent No. 3,959,461 in view of Bailey et al. of U.S. Patent No. 3,929,678 in view of Bailey et al. of U.S. Patent No. 3,299,112 also teach of these three components.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
9. The rejection of claims 1-52 under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. in view of Laughlin et al. of U.S. Patent No. 3,959,461 in view of Bailey et

al. of U.S. Patent No. 3,929,678 in view of Bailey et al. of U.S. Patent No. 3,299,112 is maintained and repeated for the above-stated and reasons of record. Wilson et al. teach of the well-known property that cyclodextrins demonstrate a remarkable complexation behavior with a wide variety of inorganic and organic inclusions, (see page 927). In addition, Wilson et al. teach of binding constants between the inclusions and the cyclodextrin. In fact, Wilson et al. further teach of binding constants between beta-cyclodextrin and fluorocarbon as well as anionic surfactants, (see pages 927 and 928). Bailey et al. teach of the quaternary ammonium surfactants, (see abstract and entire patent). Laughlin et al. teach of detergent compositions that contain ethoxylated zwitterionic surfactants and anionic surfactants and even cationic surfactants, (see entire patent). Bailey et al. teach of the surfactants of organosilicon, (see columns 1 and 2). Wilson et al. teach of a composition, which contains cyclodextrin along with an anionic surfactant. Laughlin et al. teach of compositions, which contain ethoxylated zwitterionic surfactants and anionic surfactants and even cationic surfactants, while Bailey et al. teach of quaternary ammonium surfactants and Bailey et al. disclose of organosilicon surfactants. Due to the fact that it is well known that cyclodextrins are used to encapsulate inclusions and because Wilson et al. do teach of a composition which contains beta-cyclodextrin and fluorocarbon as well as anionic surfactants, (see pages 927 and 928), it would have been well within the purview of the skilled artisan to include other surfactants in a composition which contains cyclodextrin. The skilled artisan would have been motivated to include other surfactants as an optimization in a cyclodextrin composition, especially when Wilson et al. teach of a composition between

a beta-cyclodextrin and fluorocarbon as well as anionic surfactants, (see pages 927 and 928). In addition, the skilled artisan would have been motivated manufacture this CD composition because it is well known in the art that CDs are known in the art to encapsulate hydrophobic moieties. It is well within the level of the skilled artisan to use CDs to deliver hydrophobic substances as well as encapsulating hydrophobic moieties acting as a hydrophobic moiety scavenger.

10. Furthermore, applicants' claims recite the word "comprising", which is open-claim language. It is held "the word 'comprising'" incorporates additional steps of procedures and does not exclude materials or processes not recited in the claim." see *Gould v. Mossinghoff, Comr. Pats.*, (DCDC 1982) 215 USPQ 310. For these reasons, Woo et al. does render the instant claims under the judicially created doctrine of obviousness-type double patenting as being unpatentable.

Obviousness-type Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-52 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 5,578,563. Although the conflicting claims are not identical, they are not patentably distinct from each other because Trinh et al. do teach of a composition comprising CD with a surfactant. Trinh et al. further state that the surfactant can be a surfactant that is cationic, nonionic, amphoteric, zwitterionic, anionic polymeric, cationic polymeric, (see claims 1, 10, 11, and 13-15)..

13. The rejection of claims 1-45 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 Trinh et al. of U.S. Patent No. 5,207,933 is withdrawn in response to the amendment and applicants' response of June 9, 2003.

14. The rejection of claims 1-45 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of Woo et al. of U.S. Patent No. 5,942,217 is removed in response to the Terminal Disclaimer of June 16, 2003.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. C. Jones whose telephone number is (703) 308-4634. The examiner can normally be reached on Mondays through Fridays from 8:30 am to 6:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marianne Seidel can be reached on (703) 308-4725. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-

1235.

Dwayne C. Jones
DWAYNE C. JONES
PRIMARY EXAMINER
Tech. Ctr. 1614
August 29, 2003